

3.5 Granite Bay

Daily minimum, maximum, and average values of temperature (T), relative humidity (RH), scalar wind speed (S), and standard deviation of the unit vector wind direction (σ_{θ}) are listed in Tables 19, 20, 21, and 22. In addition, unit vector wind direction (θ) and vector wind speed (U) for each day are also listed in these tables. The 5-min values of θ and U were used to construct wind roses for June, July, August, and September which are shown in Figures 37, 38, 39, and 40, respectively.

Average high temperatures in Granite Bay ranged from 30 to 34 °C with lows of about 15 °C. The average relative humidity in the day was about 20% with values of 70 to 80% at night. Scalar average wind speed was about 2.5 m s⁻¹. The predominate wind flow at this site during June, July, and August was from the southeast with winds rarely exceeding 5 m s⁻¹. By September, however, the relatively light southeasterly, northeasterly and northwesterly winds dominate the flow regime.

Table 19. Granite Bay monthly weather and wind summary for June.

Day	T (°C)			RH (%)			S (m s ⁻¹)			Θ (deg)	U (m s ⁻¹)	C _g (deg)		
	min	max	avg	min	max	avg	min	max	avg			min	max	avg
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2	16.8*	33.5*	27.4*	13.8*	52.9*	25.3*	1.1*	4.4*	2.4*	193.8*	1.9*	8.1*	66.5*	19.3*
3	12.1	33.5	22.8	16.4	78.0	43.3	0.6	3.0	1.9	187.5	1.2	8.0	70.3	19.3
4	13.2	32.6	22.1	12.9	72.2	42.4	0.3	5.0	2.7	177.3	2.2	7.0	58.6	16.8
5	10.9	29.1	18.9	20.8	81.7	55.4	0.9	5.8	3.5	163.3	2.9	9.6	60.0	18.2
6	12.8	30.7	21.3	17.2	81.5	49.0	1.0	4.6	2.6	171.2	2.2	6.4	67.2	17.6
7	12.8	25.0	18.7	34.5	86.8	60.7	1.4	5.4	3.5	175.1	3.1	10.7	27.1	15.5
8	13.1	22.3	16.7	41.6	96.2	72.7	1.2	4.7	2.7	175.6	2.3	7.9	46.5	15.8
9	11.7	24.9	17.4	30.0	87.4	63.3	1.1	5.4	3.2	172.8	2.8	10.2	51.8	16.7
10	13.1	27.3	18.8	22.5	86.6	56.5	0.7	4.9	2.6	166.4	2.0	3.1	79.3	18.8
11	11.4	28.6	21.0	24.0	86.6	51.0	0.3+	4.0+	1.8+	249.3+	0.3+	3.7	66.7	17.9
12	16.5	32.7	24.6	25.9	73.1	48.8	0.7	4.0	2.1	312.6	0.5	7.3	50.0	19.6
13	18.4	38.3	28.7	18.2	76.4	41.9	0.2	7.5	4.0	333.9	3.5	5.9	63.8	16.9
14	18.6	42.2	31.2	13.8	71.3	38.2	0.2	3.3	1.7	11.7	0.6	2.1	69.1	20.1
15	21.7	40.4	31.5	15.0	75.9	42.6	0.4+	3.4+	1.8+	358.2+	0.5+	2.7	77.3	18.6
16	20.0	38.5	29.8	13.9	84.3	41.8	0.2+	5.8+	2.1+	320.1+	0.7+	3.3	75.8	19.4
17	17.4	34.3	24.8	24.1	84.1	53.2	0.4+	4.5+	2.7+	176.2+	2.3+	4.2	60.3	16.6
18	14.8	27.5	20.1	33.9	84.8	63.4	1.3	5.6	3.9	172.5	3.6	10.1	27.2	15.7
19	13.5	34.7	23.9	21.8	90.1	55.1	0.3+	3.6+	2.0+	271.0+	0.6+	0.7+	59.2+	18.8+
20	18.4	38.2	28.3	14.2	76.5	43.9	0.2	3.4	1.7	186.5	0.5	0.5	77.7	19.2
21	20.0	39.6	29.6	14.7	65.6	37.6	0.5	3.6	2.0	174.4	1.4	7.4	72.6	18.8
22	17.6	35.2	26.5	21.6	65.3	38.4	0.7	4.7	2.9	175.1	2.6	9.6	36.7	16.1
23	14.3	33.5	23.1	22.4	75.9	49.1	1.0	4.0	2.5	176.5	2.1	7.1	62.6	17.4
24	16.1	35.1	24.7	23.6	70.2	47.7	0.8	4.1	2.4	175.1	1.8	9.4	75.4	18.2
25	15.8	36.7	26.0	14.2	77.9	46.7	0.7	3.8	2.1	182.4	1.4	7.3	68.4	19.3
26	17.2	38.5	28.3	19.1	68.6	38.8	0.2	3.6	1.9	185.7	1.4	7.2	69.3	19.1
27	20.9	39.0	29.7	20.2	50.1	32.9	1.0	3.7	2.1	179.4	1.6	6.8	60.5	18.1
28	20.9	38.2	29.0	20.5	50.0	34.9	0.8	4.3	2.4	175.6	1.9	6.4	50.3	17.4
29	16.8	35.1	25.3	26.6	71.1	45.9	1.6	4.7	2.9	172.1	2.6	9.8	33.5	16.5
30	13.8	31.2	21.1	23.8	84.7	55.2	1.7	5.4	3.5	168.3	3.2	10.4	28.6	15.8
min	10.9	22.3	16.7	12.9	50.0	25.3	0.2	3.0	1.7		0.3	0.5	27.1	15.5
max	21.7	42.2	31.5	41.6	96.2	72.7	1.7	7.5	4.0		3.6	10.7	79.3	20.1
avg	15.9	33.7	24.5	21.4	76.1	47.4	0.7	4.5	2.5	178.7	1.4	6.7	59.0	17.8

Explanation of Symbols:

- All data unavailable for day
- * More than two hours of data unavailable
- + Two hours or less of data unavailable
- (no symbol) All data available for day

Table 20. Granite Bay monthly weather and wind summary for July.

Day	T (°C)			RH (%)			S (m s ⁻¹)			Θ (deg)	U (m s ⁻¹)	C _g (deg)		
	min	max	avg	min	max	avg	min	max	avg			min	max	avg
1	13.1	29.8	20.6	29.6	80.7	53.0	2.0	5.0	3.2	172.9	2.9	8.9	37.4	16.5
2	13.1	28.1	19.8	21.7	79.3	50.3	1.5	5.0	3.1	178.0	2.8	9.5	31.4	16.3
3	11.5	26.8	18.7	35.0	86.0	60.6	1.3	4.7	2.6	186.8	2.1	7.2	50.3	17.0
4	12.0	30.8	20.8	17.7	83.6	52.9	0.6	4.8	2.3	182.2	1.8	7.6	64.2	20.0
5	12.8	27.2	19.1	30.9	84.4	60.3	1.8	5.2	3.4	174.3	3.0	10.3	34.1	16.2
6	12.7	27.8	19.5	29.9	83.4	57.9	1.3	4.5	2.7	176.8	2.3	8.7	37.8	16.5
7	12.4	27.7	19.2	25.1	84.2	57.8	1.6	4.8	3.0	176.3	2.6	9.9	46.3	16.8
8	12.3	30.5	21.3	25.0	90.7	56.6	0.5+	4.2+	2.1+	177.2+	1.1+	0.3	73.5	19.4
9	13.3	33.5	24.4	18.8	86.8	45.9	0.4+	3.9+	1.8+	219.2+	0.8+	4.3	61.7	19.9
10	16.6	33.5	24.8	14.3	66.3	43.7	0.9	3.8	2.5	172.7	2.1	6.0	41.3	16.2
11	15.4	35.3	25.3	16.8	74.3	43.7	1.0	3.7	2.4	185.8	1.7	8.0	58.3	18.4
12	14.9	32.5	22.8	27.4	80.0	53.9	1.2	4.8	2.8	177.7	2.5	7.7	50.8	16.5
13	14.2	31.6	22.0	23.4	80.7	51.6	0.7	4.5	3.0	167.4	2.5	6.4	67.0	17.3
14	16.0	35.3	25.3	15.1	66.0	38.4	0.9	3.4	2.1	186.9	1.0	6.2	68.1	17.7
15	16.5	34.3	24.9	13.2	60.5	37.4	1.1	3.9	2.6	173.8	2.2	8.4	41.1	16.2
16	13.6	27.4	19.1	34.6	84.6	62.9	2.0	5.2	3.5	172.6	3.2	10.1	29.5	15.3
17	14.0	28.0	19.5	31.4	86.2	62.5	1.7	5.1	3.2	177.6	2.8	9.3	40.0	17.1
18	13.2	34.0	23.2	13.6	88.0	50.7	0.6	3.4	1.9	190.8	0.9	4.7	67.3	19.6
19	15.5	36.5	26.3	13.9	70.3	35.8	0.2	3.3	1.8	192.0	0.9	5.5	64.6	19.8
20	15.0	37.4	26.0	17.5	73.7	43.2	0.4	4.1	2.1	192.1	1.5	8.3	64.8	19.0
21	14.6	33.8	23.7	19.7	76.2	47.8	1.4	4.6	3.0	170.9	2.7	8.9	27.6	16.0
22	15.0	34.4	24.1	17.4	83.3	50.9	0.3	4.6	2.4	175.3	1.7	7.3	79.9	19.0
23	15.7	37.2	27.0	12.3	78.1	39.4	0.3+	3.1+	1.8+	218.0+	0.4+	2.7+	69.0+	19.7+
24	15.7	38.5	28.4	11.3	76.2	36.7	0.3	3.3	1.7	159.1	0.2	4.7	65.9	18.2
25	17.5	37.5	27.4	17.0	65.8	38.5	0.6	3.8	2.2	177.5	1.7	5.6	57.8	17.5
26	17.2	32.6	23.9	21.3	63.4	42.5	2.1	5.5	3.6	168.1	3.2	9.4	33.2	15.2
27	13.4	34.3	23.3	16.4	80.2	48.0	0.8	3.9	2.0	171.4	1.4	6.6	65.4	20.5
28	15.7	37.8	27.1	14.8	77.6	41.1	0.4	3.2	1.6	191.6	0.4	3.0	61.3	19.4
29	16.1	38.8	28.3	12.3	81.4	39.2	0.3+	3.8+	1.8+	201.6+	0.5+	2.6+	58.8+	18.7+
30	20.0	39.8	30.2	14.3	69.1	34.5	0.3+	3.3+	1.7+	216.7+	0.4+	2.7	71.8	19.7
31	18.9	40.8	30.2	10.5	80.5	38.0	0.3+	4.0+	1.9+	327.3+	0.9+	0.5	74.0	15.8
min	11.5	26.8	18.7	10.5	60.5	34.5	0.2	3.1	1.6		0.2	0.3	27.6	15.2
max	20.0	40.8	30.2	35.0	90.7	62.9	2.1	5.5	3.6		3.2	10.3	79.9	20.5
avg	14.8	33.3	23.7	20.1	78.1	47.6	0.9	4.2	2.4	178.4	1.7	6.5	54.6	17.8

Explanation of Symbols:

- All data unavailable for day
- * More than two hours of data unavailable
- + Two hours or less of data unavailable
- (no symbol) All data available for day

Table 21. Granite Bay monthly weather and wind summary for August.

Day	T (°C)			RH (%)			S (m s ⁻¹)			Θ (deg)	U (m s ⁻¹)	C _g (deg)		
	min	max	avg	min	max	avg	min	max	avg			min	max	avg
1	22.3	40.8	31.5	15.1	62.7	37.0	0.2	3.7	2.0	125.4	0.5	3.9	69.4	16.5
2	21.8	39.5	31.1	17.1	76.7	37.9	0.6	3.8	2.1	169.6	1.5	5.4	72.0	16.3
3	21.8	35.8	28.0	17.7	53.3	35.7	1.2	3.8	2.5	176.4	1.9	7.6	44.5	16.0
4	17.2	36.1	26.1	22.6	69.4	42.6	0.8	3.4	2.1	181.4	1.4	6.9	67.3	17.6
5	18.8	38.2	28.0	13.9	60.9	36.8	0.6	3.5	2.3	188.8	1.5	7.8	69.6	18.3
6	18.5	37.4	27.2	18.8	56.0	35.7	0.9	3.8	2.3	175.5	1.9	7.4	73.4	18.2
7	14.5	30.3	21.5	32.2	83.1	56.4	2.0	5.1	3.4	171.1	3.2	9.6	32.2	15.5
8	13.8	32.6	21.6	22.9	93.5	60.9	1.0	4.0	2.5	179.1	2.1	7.2	74.0	17.8
9	14.8	33.1	23.0	20.3	79.6	49.7	1.4	4.0	2.5	173.8	2.0	9.4	48.1	16.7
10	13.8	29.9	21.1	21.7	82.0	53.3	1.0	5.1	3.0	164.4	2.6	6.2	44.7	16.1
11	12.8	35.7	24.5	11.1	88.0	45.0	0.3+	3.9+	1.9+	302.9+	0.6+	1.5	42.6	15.0
12	16.4	38.0	27.7	12.3	66.5	33.3	0.2	3.7	2.1	155.9	0.9	4.2	69.3	18.1
13	17.6	36.9	26.6	11.1	58.0	29.1	0.3	3.6	2.1	174.0	1.1	4.5	58.1	16.3
14	14.9	37.6	27.4	12.6	69.7	32.6	0.2	3.2	1.9	177.3	0.7	5.5	59.1	18.1
15	17.8	37.6	27.4	12.1	55.1	31.4	0.6+	3.5+	2.0+	152.8+	0.9+	3.2	68.3	18.7
16	15.1	39.0	28.0	7.9	64.1	31.0	0.2	3.6	2.0	5.9	0.1	2.3	50.8	15.9
17	18.2	36.8	27.4	16.8	52.1	32.7	0.5	3.5	2.1	164.3	1.4	7.0	58.5	18.0
18	16.5	33.4	24.1	16.5	55.6	35.9	0.8	4.6	2.8	166.1	2.2	8.9	78.1	17.5
19	15.3	31.0	22.0	24.8	75.8	49.5	1.4	5.3	3.1	170.6	2.7	9.3	32.2	15.5
20	13.6	32.2	22.4	14.7	74.0	44.6	0.3	3.1	1.8	178.2	0.8	3.8	73.4	19.2
21	13.7	34.3	24.8	15.6	74.2	39.8	0.2	3.0	1.6	157.3	0.6	3.5	69.0	19.0
22	16.2	35.2	25.1	16.9	65.0	41.9	0.8	3.2	2.0	179.2	1.2	6.1	60.2	18.2
23	14.7	30.6	22.1	24.1	80.4	52.4	1.3	3.8	2.7	171.0	2.3	8.6	51.0	16.2
24	14.8	34.3	23.7	13.5	78.0	47.9	0.3+	3.6+	2.1+	201.3+	0.2+	0.0	76.6	16.9
25	16.0	36.8	26.7	10.9	65.8	33.3	0.3	3.6	2.1	306.1	0.1	3.6	72.9	15.2
26	18.0	35.6	26.3	15.7	57.4	32.8	1.3	3.5	2.4	170.7	1.9	7.0	40.8	15.1
27	17.0	36.0	26.5	11.0	63.8	32.5	0.8	3.3	2.1	173.7	1.4	3.3	58.0	16.7
28	17.5	34.2	25.3	19.9	59.0	38.5	1.2	4.3	2.6	174.2	2.1	8.9	58.0	16.6
29	14.9	20.4	17.6	46.9	79.4	64.8	1.4	4.7	2.9	160.6	2.8	8.6	26.7	14.8
30	15.4	20.0	17.3	54.7	84.3	71.3	1.1	3.8	2.7	158.9	2.5	9.0	23.9	14.6
31	14.6	25.3	18.7	41.6	86.8	68.9	2.3	5.3	3.6	167.8	3.2	10.5	29.8	15.2
min	12.8	20.0	17.3	7.9	52.1	29.1	0.2	3.0	1.6		0.1	0.0	23.9	14.6
max	22.3	40.8	31.5	54.7	93.5	71.3	2.3	5.3	3.6		3.2	10.5	78.1	19.2
avg	16.4	34.0	24.9	19.8	70.0	43.1	0.8	3.9	2.4	170.8	1.5	6.2	56.5	16.8

Explanation of Symbols:

- All data unavailable for day
- * More than two hours of data unavailable
- + Two hours or less of data unavailable
- (no symbol) All data available for day

Table 22. Granite Bay monthly weather and wind summary for September.

Day	T (°C)			RH (%)			S (m s ⁻¹)			Θ (deg)	U (m s ⁻¹)	C _g (deg)		
	min	max	avg	min	max	avg	min	max	avg			min	max	avg
1	13.7	20.7	15.7	54.8	96.4	83.6	1.6	5.5	3.0	166.4	2.5	10.0	22.4	14.1
2	14.1	23.3	17.8	40.2	95.3	69.9	0.3+	3.4+	1.7+	151.3+	1.3+	0.5	52.2	17.8
3	13.6	24.8	18.6	27.3	82.3	56.1	1.1	4.3	2.4	175.5	1.9	6.2	71.8	16.8
4	11.3	25.4	17.7	23.7	80.8	54.1	0.4+	4.4+	2.3+	164.0+	1.3+	2.3	74.7	18.1
5	10.3	26.5	18.6	21.0	76.2	48.4	0.3+	4.9+	2.5+	337.9+	1.8+	0.9	75.3	14.9
6	9.9	31.4	21.2	17.3	76.7	42.9	0.3+	3.9+	1.7+	1.3+	0.6+	3.0+	74.1+	21.0+
7	13.1	34.1	23.5	11.6	83.5	40.1	0.3	3.8	1.8	59.1	0.5	2.6	75.7	17.7
8	14.5	33.8	24.6	12.7	65.5	35.7	0.7+	4.1+	2.4+	157.3+	1.4+	5.3	54.7	15.1
9	15.8	32.0	23.1	20.5	65.6	42.8	0.5	3.7	2.0	160.7	1.3	4.7	48.6	16.6
10	14.0	33.8	23.3	15.3	87.1	44.2	0.3+	2.9+	1.7+	162.9+	0.9+	0.6	67.7	17.2
11	15.1	34.7	24.6	14.1	76.2	41.9	0.6	3.3	2.0	56.2	0.3	3.6	49.5	15.3
12	16.0	35.2	25.4	17.7	71.8	40.6	0.2	3.3	1.8	24.7	0.5	1.9	65.1	14.7
13	19.0	37.5	27.1	16.2	63.9	35.8	0.3+	4.2+	1.9+	152.2+	1.0+	3.6	64.2	15.0
14	17.8	30.0	24.2	32.6	76.8	53.8	0.7	4.5	2.5	178.5	1.9	4.2	33.6	14.6
15	15.2	30.6	21.7	21.9	89.0	60.6	1.4	4.2	2.5	165.9	2.2	7.7	49.4	16.3
16	14.7	30.9	22.2	25.8	91.2	57.7	0.4+	4.6+	2.0+	110.8+	0.1+	2.3	63.6	18.5
17	15.0	35.7	24.9	17.7	77.9	45.1	0.2	3.3	1.9	15.4	0.9	3.3	58.3	14.6
18	15.5	38.0	27.2	13.7	80.1	43.4	0.4+	3.7+	1.9+	72.3+	0.3+	1.9+	63.2+	15.5+
19	17.5	38.8	28.3	15.1	67.3	38.5	0.3+	3.1+	1.9+	83.2+	0.7+	3.4+	55.2+	15.9+
20	19.4	38.4	28.6	18.2	70.6	40.7	0.4+	5.3+	2.2+	152.7+	1.2+	6.1	74.8	17.8
21	15.8	24.5	19.3	46.5	85.6	68.9	1.8	6.0	3.8	178.6	3.4	9.9	28.5	15.1
22	14.7	24.1	18.7	46.9	88.6	71.3	0.4+	4.3+	2.1+	151.4+	0.4+	3.4	55.3	16.6
23	11.0	26.9	18.3	17.5	96.9	60.4	0.3*	4.0*	1.9*	341.0*	0.9*	2.2+	69.6+	16.3+
24	10.6	30.1	20.4	21.9	87.8	49.5	0.5	3.6	2.0	37.6	0.6	3.6	74.9	14.9
25	14.0	33.0	23.0	18.0	65.6	41.5	0.3+	3.0+	1.9+	48.4+	0.6+	3.6	69.5	17.3
26	14.9	33.4	23.5	13.8	74.1	39.7	0.5+	3.9+	2.1+	356.4+	0.7+	3.4	56.5	14.4
27	14.1	29.7	20.3	26.8	81.6	57.4	0.4+	4.4+	2.4+	165.9+	2.0+	0.5	37.0	15.4
28	13.0	25.3	17.8	39.6	86.8	67.9	0.3+	4.9+	2.3+	163.4+	1.8+	4.0	78.9	17.8
29	11.3	31.9	20.5	27.3	94.5	61.9	0.5*	3.1*	1.6*	151.4*	0.4*	2.5+	54.8+	16.6+
30	14.5	33.2	23.6	25.1	80.8	52.6	0.5+	2.9+	1.9+	106.7+	1.1+	3.2	67.7	16.2
min	9.9	20.7	15.7	11.6	63.9	35.7	0.2	2.9	1.6		0.1	0.5	22.4	14.1
max	19.4	38.8	28.6	54.8	96.9	83.6	1.8	6.0	3.8		3.4	10.0	78.9	21.0
avg	14.3	30.9	22.1	24.0	80.5	51.6	0.5	4.0	2.1	152.7	0.7	3.7	59.6	16.3

Explanation of Symbols:

- All data unavailable for day
- * More than two hours of data unavailable
- + Two hours or less of data unavailable
- (no symbol) All data available for day

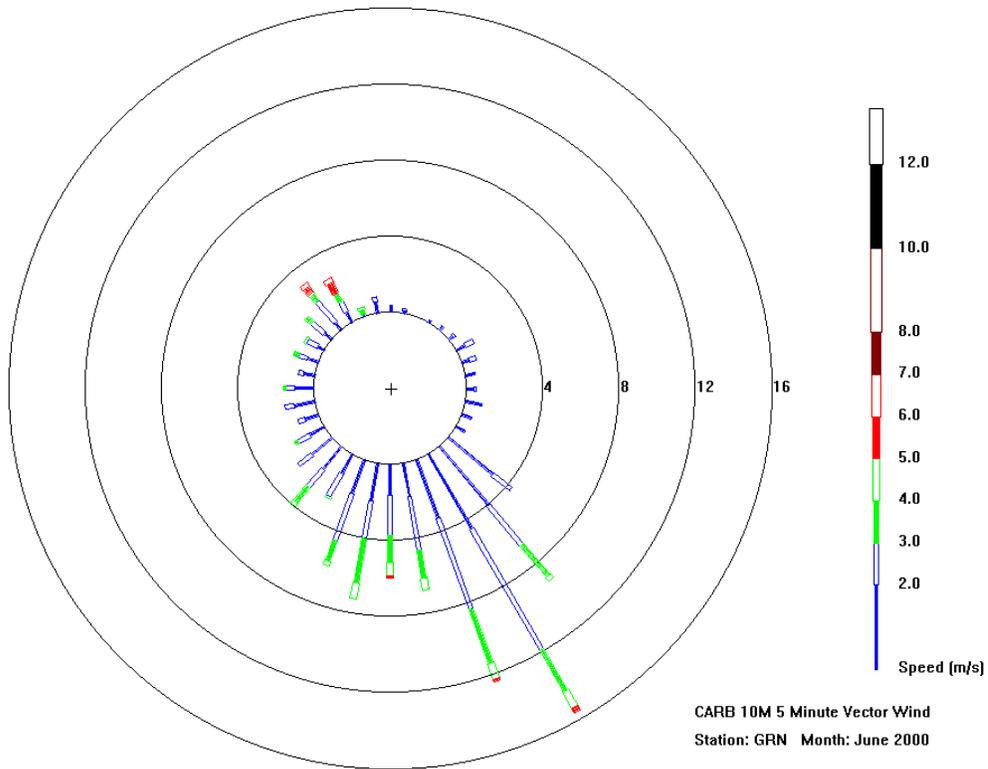


Figure 37. Granite Bay wind rose for June.

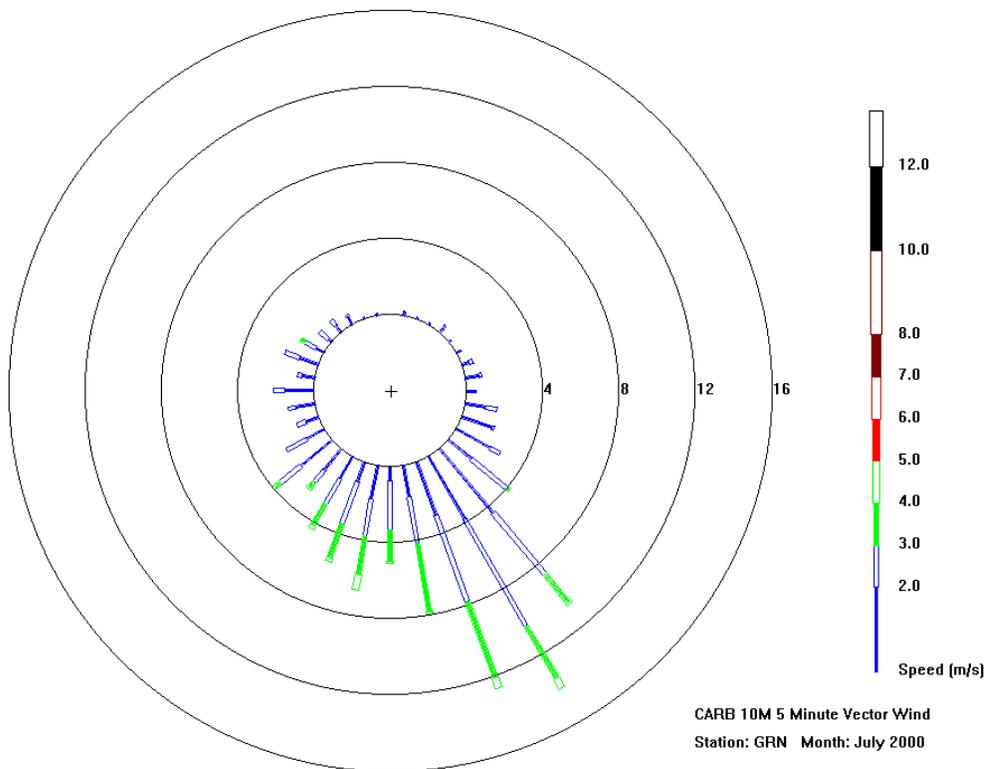


Figure 38. Granite Bay wind rose for July.

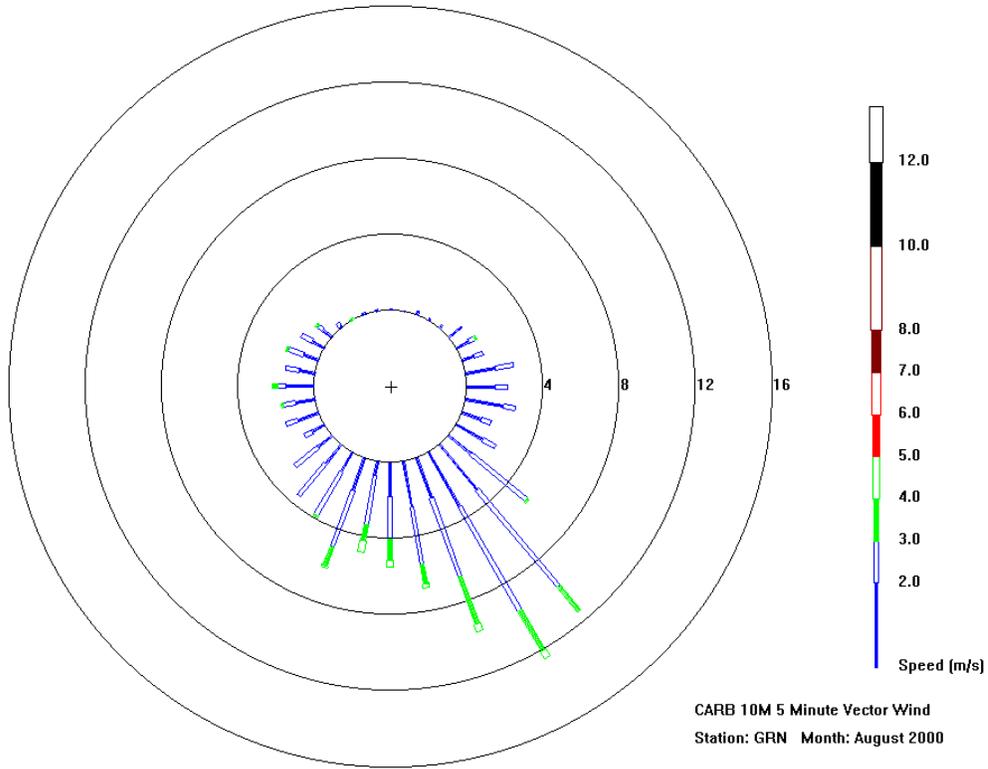


Figure 39. Granite Bay wind rose for August.

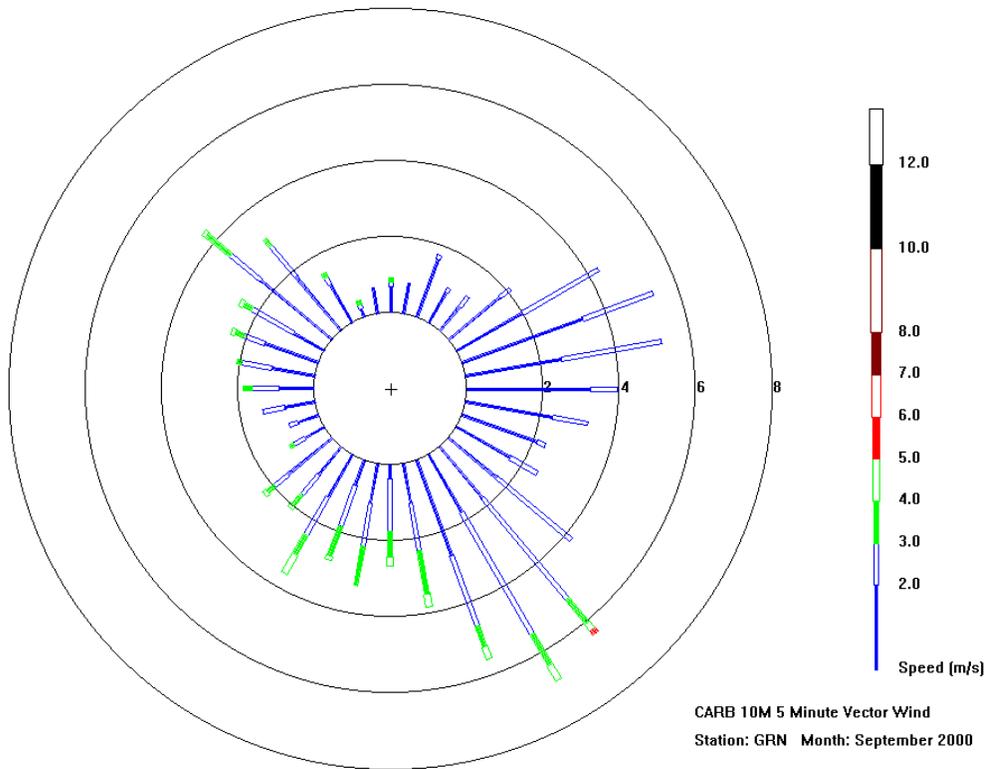


Figure 40. Granite Bay wind rose for September.